



November 12, 2002

ATTN: Bryan Alcorn
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: 2005 Title 24 Standard, Draft 2 Comments

Dear CEC:

Following a review of Draft 2 of the 2005 Energy Efficiency standards we are in agreement with many of the proposed changes to the lighting control sections of the standards. These changes and added measures will increase the energy efficiency of lighting systems in California buildings. They provide continued work in furthering the CEC's mission.

From our review we offer the following comments and recommendations that we would like to have the Standards project team consider:

1. Section 101, Section 119 (b), (f), (g), Section 131 (e) 9. – and related sections referring to photocell, photoelectric or photosensor control; The change in terminology from “photocell sensor” and “photocell sensor device” to “photoelectric switch” causes some confusion by its description. In the lighting controls industry using the term “switch” indicates there is an ON or OFF action associated with the control. Although this may be correct in describing some photo sensing control devices and strategies, it is not correct terminology for photo sensing devices that are used for dimming or changing lighting level output on a continuing or ramping basis. Daylighting control by dimming light level output is a common control strategy for many interior lighting applications.

We recommend using the terminology of “photocell device” or “photosensing device” or “photoelectric device” and leave the word “switch” off altogether to avoid confusion.

2. Section 119, (h) Multi-level Astronomical Time-switch Controls. We recommend adding to the requirements the following important provisions:
 - a. To requirement 4, include Time Zone along with longitude and latitude. Knowing the time zone in which the astronomic time-switch is operating is a required parameter for proper operation. Time zone cannot be accurately determined by just the parameters of longitude and latitude.
 - b. Add the requirement for automatic daylight savings time adjustment. This will automatically prevent the astronomical operation from being an hour off of its correct astronomic operation of outside lighting. This feature is usually common in most astronomic time-switches.
3. Section 131, (a) Area Controls & (d) Shut-off Controls. Early in the 2005 Standard revision process we submitted two measures recommending the need to clarify the relationship between

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these two sections. For many years the standards language has confused those implementing the standard. The result of the confusion has lead to a practice whereby a single after-hour override switch located in a corridor, hallway or common area is used to override lighting on in multiple rooms when possibly only one room requires the lighting. This practice allows lighting to be on in areas that are not used and therefore waste lighting and energy. Section 131 (a) does not allow this practice by the language in paragraphs 2. A & 2. B. However, this language is not clear enough and its intent not understood by many as it relates to Section 131 (d) Shut-off Controls. We could do a better of clarifying this by making the following recommended changes to the language previously submitted as measures:

SECTION 131

(a) Area Controls

2. Other devices, including shut-off controls that meet the requirements of section 131 (d), may be installed in conjunction with the area control switching or control device provided that they:
 - A. Permit the switching or control device of section 131 (a) 1. to override the action of the shut-off controls and all other devices; and
 - B. Do not permanently override the operation of any manual, automatic or shut-off system.

EXCEPTION 1 & 2 to Section 131 (a) - TO REMAIN THE SAME

(b) Shut-off Controls

2.
 - E. Controls an area not exceeding 5,000 square feet; and
 - F. Separately controls each area enclosed by ceiling-height partitions.
4. Section 131, (a) 2 Area Controls. It appears that new paragraphs C & D were inadvertently copied from the Exception 1 to Section 131 (a). These paragraphs should be removed.
5. Section 131 (b) Controls to Reduce Lighting. The change to the main paragraph seems to complicate the definition of what this part of the standard is trying to accomplish. We understand the intent behind the change, but the language makes one wonder if we're still asking for compliance with what is commonly considered "dual level" or 50% (uniform two switch) control or an additional level of control beyond this. It isn't clear to most that the level of lighting described as "less than 35% of full rated power" would essentially be 0% (or just plain "OFF") as would be common practice.

In summary, the changes make this section appear like something has drastically changed in the requirement when little has. We recommend changing the language to clarify the requirement more.

6. Section 131 (f) 2. Control for Outdoor Lighting. We have concern that the language in this paragraph is not clear. Paragraph 1 already requires outdoor lighting to be turned off when daylight is available. Paragraph 2 seems to be redundant in "shall" requirement (1) "turns off the lighting when not needed", and it doesn't seem to tie the ability to reduce exterior lighting "by at least 50% but not exceeding 67%" directly to facility occupancy time, establishment hours, etc., as in Executive Order D-19-01. Reducing outdoor lighting level during times when a facility is closed or there is reduced occupancy is an energy efficient and commonly used practice. It probably just needs to be a little clearer in the language.

The Watt Stopper appreciates the opportunity to participate in this public process. Please feel free to call if you have any questions(925) 454-8225.

Sincerely,

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